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| 09/585,870 | 06/01/2000 | Tetsuo Maeda | SONY-T0618 | 4714 |

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EXAMINER

NGUYEN, DZUNG C

ART UNIT PAPER NUMBER

2652

DATE MAILED: 03/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,870

Applicant(s)

Maeda

Examiner

Dzung Nguyen

Art Unit

2652



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Jun 1, 2000

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-26 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-26 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

DETAILED ACTION

1. Claims 1-26 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3-8, 10-15 and 17-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Furukawa et al, US patent (6,160,780) .

Regarding claim 1, Furukawa et al teach a disc drive [fig 1] for driving a disc shaped recording medium [3], comprising: a base [40, fig 4]; disc rotation driving means [45, fig 4] disposed on the base [40] for rotating a disc shaped recording medium [3] loaded in the base [40]; recording and/or reading means [47] disposed on the base [40] for recording data on and/or reading data from the disk shaped recording medium [40]; guide means [485] disposed on the base [40] for movably supporting the recording and/or reading means [47] between inner and outer circumferences of the disc shaped recording medium [3], while the disc shaped recording medium is rotated; a feeding mechanism

[480 and 483] disposed on the base [40] for feeding the recording and/or reading means [47] along the guide means [485]; and a plurality of receiving portions [441] for receiving support for the base [40], the receiving portions [441] being disposed symmetrically on the base with respect to a center line of the base along the direction of the movement of the recording and/or reading means [47] (see col. 6 lines 39-68).

Regarding claim 8, Furukawa et al teach an optical disc drive [fig 3] for recording data on and/or reproducing data from an optical disc [3], comprising: a base [40]; disc rotation driving means [45] disposed on the base [40] for rotating an optical disc [3, fig 1] loaded in the base [40]; an optical pickup [47] disposed on the base [40] for recording data on and/or reproducing data from the optical disc [3]; guide means [485] disposed on the base [40] for movably supporting the optical pickup [45] between inner and outer circumferences of the optical disc [3], while the optical disc is rotated; a feeding mechanism [480, 483] disposed on the base [40] for feeding the optical pickup [3] along the guide means [485]; a plurality of supporting means [rubber] each with an associated elastic member [441] for elastically supporting the base [40], the supporting means [rubber] and the associated elastic members [441] being disposed symmetrically on the base [40] with respect to a center line of the base along the direction of the movement of the optical pickup [47]; a plurality of receiving portions [43t] disposed on the base for receiving the supporting means [rubber] (see fig 3 and col. 6 lines 39-68).

Regarding claim 15, Furukawa et al teach an optical disc drive [fig 1] for recording data on and/or reproducing data from an optical disc [3], comprising: a support pedestal [434]; a base [40] supported by the support pedestal [434]; disc rotation driving means [45, fig 3] disposed on the base [40] for rotating an optical disc [3] loaded in the base [40]; a disc tray [20] movably disposed on the support pedestal [434] between a first position where the optical disc [3] is removable and a second position where the optical disc [3] is at the disc rotation driving means [45]; an optical pickup [47] disposed on the base [40] for recording data on and/or reproducing data from the optical disc [3]; guide means [485] disposed on the base [40] for movably supporting the optical pickup [47] between inner and outer circumferences of the optical disc [3], while the optical disc [3] is rotated; a feeding mechanism [480 and 483] disposed on the base [40] for feeding the optical pickup [47] along the guide means [480]; and a base support member [441] for supporting the base with a plurality of supporting means [rubber] disposed symmetrically with respect to a center line of the base along the direction of the movement of the optical pickup [47], each of the supporting means including an elastic member (see fig 3 and col. 6 line 39-68).

Regarding claim 22, Furukawa et al teach an optical disc drive [fig 1] for accurately recording data on and/or reproducing data from an optical disc [3], comprising: a base [40]; disc rotation driving means [45, fig 3] disposed on the base [40] for rotating an optical disc [3] loaded in the base [40]; an optical pickup [47] disposed on the base

[40] for recording data on and/or reproducing data from the optical disc [3]; guide means [485] disposed on the base [40] for movably supporting the optical pickup [47] between inner and outer circumferences of the optical disc [3], while the optical disc [3] is rotated; a feeding mechanism [480 and 483] disposed on the base [40] for feeding the optical pickup [47] along the guide means [485]; a plurality of supporting means [441] disposed on the base each with an associated elastic member [43T] for elastically supporting the base [40], the supporting means [rubber] and the associated elastic members [441] being disposed symmetrically on the base with respect to a center line of the base along the direction of the movement of the optical pickup [47]; whereby imbalance caused by optical pickup [47] movement are eliminated and horizontal balance of the base is maintained during operation of the optical disc drive (see col. 6 lines 39-68).

Regarding claims 3, 10, 17, Furukawa et al teach wherein the disc rotation driving means [45] and the recording and/or reading means [47] are disposed on one side of the base relative to the center line, while the feeding mechanism [60] is disposed on the other side of the base [40] (see fig 3).

Regarding claims 4, 11, 18, Furukawa et al teach wherein each of the receiving portions [441] receives a supporting means [Rubber] with an elastic member [43T] for elastically supporting the base [40] (see fig 3).

Regarding claims 5, 12, 19, Furukawa et al teach wherein at least one of the supporting means [441] has a first supporting elasticity and is disposed near the disc

rotation driving means [45], while at least another one of the supporting means 441] has a second supporting elasticity different from the first supporting elasticity and is disposed away from the disc rotation driving means [45] (see fig 3 and col. 6 lines 39-68).

Regarding claims 6, 13, 20, Furukawa et al wherein at least one of the supporting means [441 at the bottom left] is disposed near the disc rotation driving means [45] and supports the base [40] at one height relative to a reference plane [41], while at least another one of the supporting means [441 at the bottom right] is disposed away from the disc rotation driving means [45] and supports the base at a different height relative to the reference plane [41] (see fig 3).

Regarding claims 7, 14, 21, Furukawa teach wherein at least two of the receiving portions [441 on the bottom left and right] are disposed on each side of the base [40] with respect to the center line (see fig 3).

Regarding claim 23, Furukawa et al teach wherein the disc rotation driving means [45], the optical pickup [47] and the feeding mechanism [480] are disposed on the base [40] in such a way that their total weight is essentially evenly distributed on the base [40] (see figs 3-4).

Regarding claim 24, Furukawa et al teach wherein at least two of the supporting means [441] are disposed on each side of the base [40] with respect to the center line (see fig 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter ~~as a~~ whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 9, 16 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al, US patent (6,160,780).

Regarding claims 2, 9, 16, Furukawa et al do not teach wherein a) the base is made of a single metal plate and b) the base is in range of 1.4 mm to 1.8 mm in thickness.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the base by a single metal plate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

It would have been obvious to one of ordinary skill in the disk drive art at the time the invention was made to form the base as taught by Furukawa et al by a single metal plate of 1.4

mm to 1.8 mm in thickness, through routine lab experimentation and optimization to reduce the thickness to the disk drive.

Regarding claim 25, Furukawa et al teach an optical disc drive [fig 1] for recording data on and/or reproducing data from an optical disc [3], comprising: a base [40, fig 3]; disc rotation driving means [45] disposed on the base [40] for rotating an optical disc [3] loaded in the base [40]; an optical pickup [47] disposed on the base [40] for recording data on and/or reproducing data from the optical disc [3]; guide means [483] disposed on the base [40] for movably supporting the optical pickup [3] between inner and outer circumferences of the optical disc [3], while the optical disc is rotated; a feeding mechanism [480 and 483] disposed on the base for feeding the optical pickup [47] along the guide means [485]; and supporting means [441] each with an associated elastic member [rubber] for elastically supporting the base [40], the supporting means [441] and the associated elastic members [rubber] being disposed symmetrically on the base with respect to a center line of the base [40] along the direction of the movement of the optical pickup [3] (see, figs 1 -4 and 6 and col. 6 lines 39-68) .

Furukawa et al teach the optical disk drive comprising three supporting means [441] (see fig 3). Furukawa et al do not teach the optical disk drive comprising four supporting means.

It would have been obvious to one of ordinary skill in the disk drive art at the time the invention was made to modifying the optical disk drive of Furukawa et al to including

4 four supporting means as claimed because one of ordinary skill in the art would have motivated to including one more supporting means in the disk drive of Furukawa et al for maximizing the reduction of vibration of the disk drive.

Regarding claim 26, Furukawa et al teach wherein at least two of the supporting means [441] are disposed on each side of the base [40] with respect to the center line (see fig. 3).

The prior art made of record and not relied upon

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Lee, US. Patent (5,365,506).
- b. Shiomi, US patent (6,175,544).
- c. Kajiyama et al, US patent (6,167,014).
- d. Zaun, US patent (6,061,325).
- e. Saito, US patent (6,208,606).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung Nguyen whose telephone number is (703) 305-9695. The examiner can normally be reached on Monday-Friday from 8:30 am to 6:00 pm.

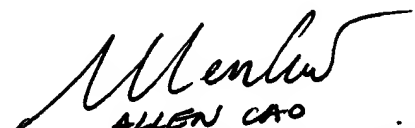
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900 and fax number is (703) 872-9314.

Dzung Nguyen

3/6/02


ALLEN CAO
PRIMARY EXAMINER